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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,728	08/21/2003	Toyotaka Hirao	241563US3CONT	6197
22850	7590	01/31/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			FORD, JOHN K	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 01/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/644,728	<b>Applicant(s)</b> HIRAO ET AL.	
	<b>Examiner</b> John K. Ford	<b>Art Unit</b> 3753	

-- Th MAILING DATE of this communication app ars on the cover sh t with th correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Nov. 30, 2004
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Applicants' response of November 30, 2004 alleges that all of the drawing corrections that were approved in the parent application 09/326,009 have already been inserted in the originally filed drawings in this application. This is clearly not the case. In the parent case Figures 3 and 4 were to be labeled as "prior art" and in Figure 3 the word "air" was to be substituted for the Japanese characters at the right. These drawings have not been made here.

The drawings are objected to because the changes identified above have not been made. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly

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labeled as "Annotated Marked-up Drawings" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Applicant's election of Group I, claims 1-6, without traverse is acknowledged.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JA 60-128012 or JA 10-226221 in view of Bednarck (4,821,782) and either of JP 58-221714 or Nonoyama (Fig 16A).

Applicants' response of November 30, 2004 has been studied carefully. On page 14, lines 9-10 of the specification a disclosure is found that bypass valve 38, during a cooling operation, can divert the engine coolant water to the bypass flow path. That the bypass valve 38 has this capability has been added as a limitation to claim 1. Applicants' attention is directed to MPEP 2114, incorporated here by reference, where clearly states that in an apparatus claim the manner of operating the apparatus does not differentiate the apparatus claim from the prior art. Here, it is submitted that the intended manner of operation of bypass valve 38 is being attempted to be claimed as a structural limitation using the words "disposed such that when." It is submitted that the location of the bypass valve in the prior art is such that this function is possible and therefore this claim limitation is met, even in the absence of the reference explicitly

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teaching this manner of operation. Notwithstanding that reasoning, the Examiner has obtained a translation of JP 58-221714 that shows that the claimed manner of operation is known in the prior art, as would appear to be intuitive from the fact that much of the air must pass through the heater core at all times (regardless of the position of the air bypass damper) and leaving the heater on during maximum cooling would only interfere with, or even nullify, the delivery of cool air to the occupants. No reasonable designer of air conditioning equipment would do this.

JA '012 shows an air conditioner with an indoor heat exchanger 4, fan 3, coolant heat exchanger 5, damper 7, and engine 12 with a cooling water circuit having a bypass valve 13b.

JA '221 shows an air conditioner with an indoor heat exchanger 7, fan 6, coolant heat exchanger 8, damper 10, and engine 20 with a cooling water circuit having a bypass valve 21.

Neither JA '012 nor JA '221 explicitly show a reversible heat pump connected to the indoor heat exchanger to permit rapid heating of the compartment when the coolant circulatory system is not yet warmed up, as it disclosed in Bednarck.

To attach a reversible heat pump to the indoor heat exchanger 4 of JA '012 or indoor heat exchanger 7 of JA '221 to advantageously permit quick heating would have been obvious to one of ordinary skill in the art in view of the Bednarck teaching.

Moreover JA '021 or JA '221 does not appear to explicitly teach opening their respective dampers 7 and 10 when the cooling mode is selected and fully bypassing the heater core cooling water. It is submitted that such a mode of operation is the only reasonable one possible to attain maximum cooling and it is explicitly taught by JA '714, see "Constitution" section of Abstract and translation page 12, lines 7-8 (provided with this office action), and by Nonoyama Fig. 16 and the description thereof found in col. 23, line 26 - col. 24, line 44 that is incorporated here by

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reference. Figure 16A (upper Figure) shows door 84 fully open and heater 86 not operating in the cooling mode. Note in col. 25, line 22, heat exchanger 86 can be a hot-water type.

In view of either JA '714 or Nonoyama (Fig. 16A) it would have been obvious to have fully opened the respective dampers 7 and 10 of JA '012 and JA '221 to permit maximum cooling to take place in the cooling mode.

Regarding claim 2, this is shown in both JA '012 and JA '221.

Regarding claim 3, this is explicitly taught by Bednarck at col. 3, lines 49-53.

Regarding claim 4, this taught by JA '012 and JA '221.

Regarding claim 5, this is taught by JA '221 at 22.

Regarding claim 6, this is taught by JA '012 and JA '221.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Williams.

Williams teaches a bypass valve (such as disclosed at 21 in JP '221) to improve performance. See Williams, col. 1, lines 9-22, incorporated here by reference. To have equipped the prior art JA '021 or JA '221 with a bypass valve to attain the advantages discussed by Williams in the aforementioned quoted section would have been obvious to one of ordinary skill.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Nakata or Isaji et al or Murayama.

Nakata, Isaji and Murayama each teach variable compressor control to achieve better control over heating/cooling performance, something obvious to have done in the aforementioned prior art to achieve enhanced performance. The citation of three references to



show the notoriety of a particular claim limitation is supported by the following case law. In re Gorman, 18 USPQ2d 1885 (Fed. Cir. 1991), and In re GPAC, 35 USPQ2d 1116 (Fed. Cir. 1998).


Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Shaltis or Kiskis or Higashihara et al.

Shaltis, Kiskis and Higashihara each teaches using residual heating energy an obvious feature to have added to the prior art, to operate pump 22 of JP 10-228221 (for example) when the engine is inoperative. The citation of three references to show the notoriety of a particular claim limitation is supported by the flowing case law: In re Forman, 18 USPQ2d 1885 (Fed. Cir. 1991) and In re GPAC, 35 USPQ2d 1116 (Fed. Cir. 1988).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to John Ford at telephone number (571) 272-4911.



John K. Ford  
Primary Examiner